

Environmental and Natural Resources

Course Description:

A course that provides an opportunity for students to increase awareness of the close ties among living organisms as well as natural and environmental concerns with the interrelationships of living organisms and the world around us. Students are exposed to careers related to natural resources systems. Students also look closely at Nebraska's natural resources and management techniques. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

Course Code: 013000

Endorsements to

teach: AFNR

Programs of Study to which this Course applies:

Environmental and Natural Resources
Environmental and Natural Resources Plus
Diversified Agriculture Systems
Diversified Agriculture Systems Plus

AFNR.HS.3.1	
Plan and conduct natural resource management activities that apply logical, reasoned and scientifically based solutions to natural resource issues and goals.	
AFNR.HS.3.1.c	Identify proper use of tools utilized in measuring soil health.
AFNR.HS.3.1.d	Apply cartographic skills to natural resources.
AFNR.HS.3.1.f	Identify and classify common species of wildlife and fauna found in Nebraska.
AFNR.HS.3.1.g	Identify and classify common grasses, forbes, shrubs and trees found in Nebraska ecosystems.
AFNR.HS.3.2	
Analyze the interrelationships between natural resources and humans.	
AFNR.HS.3.2.a	Summarize the impacts that modern agriculture has had on our natural resources.
AFNR.HS.3.2.b	Examine and summarize how social views and movements (carbon footprints, recycling, etc. have affected the need for environmental regulations.
AFNR.HS.3.2.c	Describe current programs in place to help with the conservation and sustainability of natural resources and explain their importance.
AFNR.HS.3.2.d	Recognize the role of local, state, and national agencies/organizations in the management of our local resources.
AFNR.HS.3.2.e	Associate farming methods with different environmental conditions.
AFNR.HS.3.2.g	Explain how technology has affected the use of our natural resources.
AFNR.HS.3.2.h	Examine natural resources and environmental careers.
AFNR.HS.3.2.i	Communicate thoughts and feelings with others regarding environmental and natural resources using verbal and nonverbal communication.
AFNR.HS.3.3	
Develop plans to ensure sustainable production and processing of natural resources.	
AFNR.HS.3.3.a	Identify the components that comprise ecosystems.
AFNR.HS.3.3.b	Explain the stages of water movement through the hydrologic cycle and how the parts of the system are managed.
AFNR.HS.3.3.c	Summarize the roles of watersheds.
AFNR.HS.3.3.d	Distinguish between chemical and physical properties of drinking water.
AFNR.HS.3.3.e	Examine the major causes of water pollution.
AFNR.HS.3.3.f	Outline the methods used to determine water quality.
AFNR.HS.3.3.g	Discover the economic value of the forestry industry.
AFNR.HS.3.3.h	Describe the soil formation process.
AFNR.HS.3.3.i	Explain the processes in the nitrogen cycle.
AFNR.HS.3.3.j	Discuss the role of food chains in maintaining balanced ecosystems.
AFNR.HS.3.3.k	Demonstrate how to determine soil types and and how it affects land use.
AFNR.HS.3.4	
Demonstrate responsible management procedures and techniques to protect, maintain, enhance, and improve natural resources.	
AFNR.HS.3.4.a	Compare and contrast alternative energy sources.
AFNR.HS.3.4.b	Identify the efforts being made to keep non-native species out of a local area.

AFNR.HS.3.4.c	Identify non-native and invasive species to Nebraska.
AFNR.HS.3.4.d	Calculate the financial cost of non-native species.
AFNR.HS.3.5	
Understand management techniques for Nebraska's natural resources.	
AFNR.HS.3.5.a	Develop an understanding of the impact and importance of Natural Resources to the people of Nebraska.
AFNR.HS.3.5.b	Distinguish between the different ecosystems found in Nebraska.
AFNR.HS.CR.1	
Describe career opportunities and means to achieve those opportunities in each of the AFNR career pathways.	
AFNR.HS.CR.1.a	Evaluate and implement the steps and requirements to pursue a career opportunity in an AFNR career pathway.
AFNR.HS.CR.1.b	Examine and choose career opportunities that are matched to personal life skills, talents, and career goals in an AFNR pathway of interest.
AFNR.HS.CR.2	
Demonstrate employability skills for college and career readiness.	
AFNR.HS.CR.2.a	Model personal responsibility in the workplace and community.
AFNR.HS.CR.2.b	Speak using strategies that ensure clarity, logic, purpose and professionalism in formal and informal settings.
AFNR.HS.CR.2.c	Produce clear, reasoned and coherent written and visual communication in formal and informal settings.
AFNR.HS.CR.2.d	Synthesize information, knowledge and experience to generate original ideal and challenge assumptions in the workplace and community.
AFNR.HS.CR.2.e	Apply reason and logic to evaluate workplace and community situations from multiple perspectives.
AFNR.HS.CR.2.f	Investigate, prioritize and select solutions to solve problems in the workplace community.
AFNR.HS.CR.2.g	Contribute to team-oriented projects and builds consensus to accomplish results using cultural global competence in the workplace and community.
AFNR.HS.CR.4	
Identify and demonstrate workplace safety.	
AFNR.HS.CR.4.a	Identify and explain the implication of required regulations to maintain and improve safety, health and environments management systems.
AFNR.HS.CR.4.b	Apply health and safety practices to AFNR workplaces.
AFNR.HS.CR.4.c	Use appropriate protective equipment and demonstrate safe and proper use of AFNR tools and equipment.
AFNR.HS.CR.5	
Evaluate the nature and scope of the AFNR Career Cluster and the role of agriculture, food and natural resources (AFNR) in society and the economy.	
AFNR.HS.CR.5.a	Research, examine and discuss issues and trends that impact AFNR systems on local, state, national and global levels.
AFNR.HS.CR.6	
Identify and demonstrate leadership skills and traits in demand of leadership roles in the agriculture industry.	
AFNR.HS.CR.6.b	Craft SMART goals to achieve by the end of a specific agricultural education course.
AFNR.HS.CR.6.c	Write a career objective.
AFNR.HS.CR.6.d	Write a connection statement explaining how current coursework contributes to his or her career objective.
AFNR.HS.CR.6.e	Generate a personal statement explaining how he or she hopes to serve the people around them in their community and society.
AFNR.HS.CR.6.f	Write and deliver a speech focused on a currently controversial topic within the agricultural industry while arguing both points of view.